

ICAT 2008

PROGRAM

December 1st (Monday)

9:00 – 9:30 : Opening

9:30 – 10:30 : Invited Talk

How to Make Augmented Reality User Interfaces Work. *(Bruce Thomas)*

10:50 – 12:30 : Display

- Gaze Tracking for Near to Eye Displays.
(Timo Pylvänäinen, Toni Järvenpää, Ville Nummela)
- Correct Occlusion Effect in the Optical See-through Immersive Augmented Reality Display System.
(Kaori Murase, Tetsuro Ogi, Kota Saito, Takahide Koyama)
- Implementation of EOG-based Gaze Estimation in HMD with Head-tracker.
(Hiromu Miyashita, Masaki Hayashi, Ken-ichi Okada)
- Closed-Line Based Representation of 3D Shape for Point Cloud for Laser-Plasma Scanning 3D Display.
(Hiroyo Ishikawa, Hideo Saito)
- CAGRA: Occlusion-capable Automultiscopic 3D Display with Spherical Coverage. *(Yusuke Doyama, Tomohiro Taniakawa, Kazuyoshi Tagawa, Koichi Hirota, Michitaka Hirose)*

12:30 - 14:30 : Lunch, Poster Session 1, Demo

14:30 - Haptic Interface

- A Comparison of Output Quality among Haptic Media Synchronization Algorithms.
(Shuchun Sun, Takeshi Fujimoto, Yutaka Ishibashi, Shinji Sugawara)
- A Texture-Based Haptic Model Design with 3D Brush.
(Wataru Wakita, Kenji Murakami, Shun Ido)
- A Proposal of a Clutch Mechanism for 6DOF Haptic Devices.
(Masaharu Isshiki, Takahiro Sezaki, Katsuhito Akahane, Naoki Hashimoto, Makoto Sato)
- TeleTA: Teleoperation System with Tactile Feedback aimed at Presentation of the Physical Contact on Entire Robot Arm Surface to the Human Operator.
(Dzmitry Tsetserukou, Susumu Tachi)
- Hybrid Display of Roughness, Softness and Friction Senses of Haptics.
(Yuta Shiokawa, Atsushi Tazo, Masashi Konyo, Takashi Maeno)

16:20 – 17:40 : Multimodal System

- A Haptic Dial System for Multimodal Prototyping.
(Laehyun Kim, Manchul Han, Sangkyun Shin, Sehyung Park)
- Experiment on Teleolfaction Using Odor Sensing System and Olfactory Display Synchronous with Visual Information.
(Takamichi Nakamoto, Norihiro Cho, Nimsuk Nitikarn, Bartosz Wyszynski, Hiroki Takushima, Masashi Kinoshita)
- Construction of Dental Simulation System with Mixed Visual, Tactile, and Sound Realities.
(Hiroshi Noborio, Daisuke Sasaki, Yusuke Kawamoto, Tomoaki Tatsumi, Taiji Sohura)
- A Method of Supporting Personal Activities in Virtual Reality Space Utilizing Physiological Data.
(Masaki Hayashi, Hiromu Miyashita, Ken-ichi Okada)

December 2nd (Tuesday)

9:30 – 10:30 : Invited Talk

Natural user interfaces for collaborative environments. (*Michael Haller*)

10:50 – 12:30 : Application

- Calculation Model of Jellyfish for Simulating the Propulsive Motion and the Pulsation of the Tentacles.
(*Junsei Hirato, Yoichiro Kawaguchi*)
- An Improved Facial Orthopedic Surgery Planning System with Pre-processing FEM Modeling.
(*Lei Pan, Lixu Gu, Zhennan Yan, Sizhe Lv, Bo Zhu*)
- Simulation of Sutures for Virtual Surgery Applications.
(*Hans-Georg Menz, Kup-Sze Choi*)
- An easy-to-use Framework to integrate Data Processing and Data Fusion in VR Applications.
(*Pierre Boudoin, Samir Otmame, Malik Mallem, Hichem Maaref*)
- Moving Between Contexts - A User Evaluation of a Transitional Interface.
(*Raphael Grasset, Andreas Dünser, Mark Billingham*)

12:30 – 14:30 : Lunch, Poster Session 2, Demo

14:30 – 15:50 : Perception

- Study of stereoscopic shape perception for virtual design.
(*Laure Leroy, Philippe Fuchs, Alexis Paljic, Guillaume Moreau*)
- 1:1 Scale Perception in Virtual and Augmented Reality.
(*Emmanuelle Combe, Javier Posselt, Andras Kemeny*)
- Adaptive Body use of multipede driven by coupled neural oscillators.
(*Shogo Yonekura, Shinichiro Yagi, Yoichiro Kawaguchi*)
- Pulse Ejection Technique of Scent to Create Dynamic Perspective.
(*Junta Sato, Kaori Ohtsuki, Yuichi Bannai, Ken-ichi Okada*)

16:00 – 17:40 : Virtual Environment

- Sliding Viewport for Interactive Virtual Environments.
(*Andrei Sherstyuk, Dale Vincent, Caroline Jay*)
- Proxy-based Mechanism in Mobile Distributed Virtual Environment.
(*Lin Xu, Xiaohui Liang, Ke Xie*)
- Virtual Exploring to Jing-Hang Grand Canal.
(*Zhigeng Pan, Shengnan Chen, Liqiang Xu, Huaqing Shen, Gengdai Liu, Kangde Guo, Yibin Ye*)
- Simulator for Regional Anaesthesia in Virtual Environments with Electric Nerve Stimulation.
(*Sebastian Ullrich, Oliver Grottko, Wei Liao, Thomas Deserno, Rolf Rossaint, Torsten Kuhlen*)
- Biometrics Security in a Virtual Environment.
(*Andrea Kanneh, Ziad Sakr*)

December 3rd (Wednesday)

09:30 – 10:30 : Invited Talk

Haptics of Humans and Robots. (*Takashi Maeno*)

10:50 – 11:50 : Augmented Reality / Mixed Reality

- Creating Mixed Reality Manikins for Medical Education.
(*Andrei Sherstyuk, Dale Vincent, Benjamin Berg*)
- AR Representation System for 3D GIS based on Camera Pose Estimation using Distribution of Intersections.
(*Hideaki Uchiyama, Hideo Saito, Vivien Nivesse, Myriam Servières, Guillaume Moreau*)
- A Hierarchical Annotation Database and a Dynamic Priority Control Technique of Annotation Information for a Networked Wearable Augmented Reality System.
(*Daisuke Takada, Takefumi Ogawa, Kiyoshi Kiyokawa, Haruo Takemura*)

11:50 – 13:00 : Lunch

13:00 – 14:00 : Ending Talk

Haptics and Pseudo-Haptics: from Reserach to Industry. (*Sabine Coquillart*)

14:00 : Continued by ACE2008 (ICAT2008 registrants can attend ACE2008 on this day)

17:30 : Bus to Banquet Site will leave from Conference Site.

Poster Session 1 :

- Virtual Roommates in Ambient Telepresence Applications.
(*Andrei Sherstyuk, Kar-Hai Chu, Sam Joseph*)
- Real-time Upper Body Pose Detection using Stereo Vision ASIC.
(*ae-chan Jeong, Ho-chul Shin, Dae-hwan Hwang*)
- GPU-based photometric reconstruction from screen light.
(*Vincent Nozick, Ismael Daribo, Hideo Saito*)
- Study of Maintaining Concentration by Auditory Brain Computer Interface.
(*Rika Ito, Hideaki Touyama, Hiroki Kobayashi, Michitaka Hirose*)
- Pattern-based Gesture Interaction with a Digital Table.
(*Gunhee Kim, Hyunchul Cho, Wen-hua Pei, Ji-Hyung Park, Sungdo Ha*)
- Study on perceptual properties of images presented by Saccade-based display --- Asynchronous and depth perception.
(*Reiko Aruga, Hideo Saito, Hideyuki Ando, Junji Watanabe*)
- Angle-changeable Immersive Projection Display.
(*Yuichi Tamura, Hiroaki Nakamura*)
- Free versus constrained motion for assessing wind turbines' impacts on landscape in virtual environments.
(*Jihen Jallouli, Guillaume Moreau, Davy Salerne*)
- A Distributed Software Architecture for Collaborative Teleoperation based on a VR Platform and Web Application Interoperability.
(*Christophe Domingues, Samir Otmane, Frédéric Davesne, Malik Mallem*)
- An invariant-based approach to static Hand-Gesture Recognition.
(*Pujan Ziaie, Alois Knoll*)
- Task-Based Second Language Learning VR System.
(*Tetsuya Saito, Junichi Hoshino*)
- EEG-Based Photo Pickup.
(*Hideaki Touyama, Michitaka Hirose*)
- Multiple Conference Support Method Using Variable Speed Playing and Video Image Switching.
(*Aki Sugiyama, Kuniaki Suseki, Ken-ichi Okada*)
- Application of Computational Fluid Dynamics Simulation to Olfactory Display.
(*Hiroshi Ishida, Haruka Matsukura, Hitoshi Yoshida, Takamichi Nakamoto*)
- Experimental identification of model parameters in welding simulator and its performance evaluation by veteran welders.
(*Nobuyoshi Hashimoto, Hideo Kato*)

Poster Session 2

- Collaborative Work between Heterogeneous Haptic Interface Devices: Influence of Network Latency.
(*Pingguo Huang, Takeshi Fujimoto, Yutaka Ishibashi, Shinji Sugawara*)
- A Study for Touchable Online Shopping System with Haptical Force Feedback.
(*Kenji Funahashi, Yuuta Kuroda, Masumi Mori*)
- Development of Modified Motorcycle Simulator Assessment and Training System for the Spinal Cord Injury Patients.
(*Siao-Ying Wu, Jin-Jong Chen*)
- AR Mapping of GIS Information by Pattern-based Tracking with Particle Filter.
(*Yuko Uematsu, Hideo Saito, Myriam Servieres, Guillaume Moreau*)
- A study on user attitude toward the interactive floor. (*Seungwoo Lee, Minsoo Hahn*)
- A New Concept of Brain-Computer Interface with Environmental Event Sensing.
(*Hideaki Touyama*)
- Motion Tracking with Velocity Update and Distortion Correction from Planar Laser Scan Data.
(*Seungpyo Hong, Heedong Ko, Jinwook Kim*)
- Interconnection between Different Types of Haptic Interface Devices: Absorption of Difference in Workspace Size.
(*Takeshi Fujimoto, Pingguo Huang, Yutaka Ishibashi, Shinji Sugawara*)
- Vibration Signal Synthesis for Representing Cutaneous Tactile.
(*Xin Yin, Kazuyoshi Nomura, Hiromi T. Tanaka*)
- The use of Haptic Guide with 3D Interactions in a Large Scale Virtual Environment.
(*Sehat Ullah, Nassima Ouramdane, Samir Otmane, Paul Richard, Frederic Davesne, Malik Mallem*)
- The Shadow Dancer: An interactive performance system with a foot interface.
(*Se Hwi Park, Tae Woo Kim, Donggi Jung, Ju Min Chi, Yoon Ji Kim, Seny Lee*)
- FloatingPad: A Touchpad Based 3D Input Device.
(*Seongkook Heo, Dongwook Lee, Minsoo Hahn*)
- Navigation Assistance for Wayfinding in the Virtual Environments: Taxonomy and a Survey. (*Janki Dodiya, Vassil N. Alexandrov*)
- *Gesture Interpretation for Domestic Appliance Control.*
(*Takayuki Hattori, Yorinobu Mine, MichaelCohen, Jun Yamadera*)
- Effects of video reflection by wearable memory enhancement system.
(*Yasuhiro Kamo, Yasushi Ikei*)

Demonstrations

- 4DCap: Multi-View Dynamic 3D Object Reconstruction System.
(Wen-Chao Chen, Fu-Jen Hsiao, Chih-Jen Teng, De-Jin Shau)
- Clutching Methods for Haptic Interaction System.
(Masaharu Isshiki, Katsuhito Akahane, Naoki Hashimoto, Makoto Sato)
- Graph-Sono – Hand Drawing Sound.
(Seiichiro Matsumura)
- PONYO-PONYO!
(Kazuyoshi Tagawa, Koichi Hirota, Michitaka Hirose)
- MIMAMORI-Phone.
(Hideaki Touyama, Kazuyoshi Tagawa)
- Odor Playback Based on Computational Fluid Dynamics Simulation.
(Hiroshi Ishida, Haruka Matsukura, Hitoshi Yoshida, Takamichi Nakamoto)
- K-Cave demonstration: Seismic information visualization system using the OpenCABIN library.
(Yoshisuke Tateyama, Satoshi Oonuki, So Sato, Tetsuro Ogi)
- Super High Definition Stereo Image using 4K Projection System.
(Tetsuro Ogi, Hiroaki Daigo, So Sato, Yoshisuke Tateyama, Yasuaki Nishida)
- Demo Proposal: Screen-less Head Mounted Projector with Retrotransmissive Optics.
(Ryugo Kijima, Jyunya Watanabe)